Off-grid Community Systems in Tanzania: A Time-Series Forecasting Model for Clinical Outcomes Evaluation

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Abstract

Clinical outcomes in off-grid communities in Tanzania are influenced by various factors such as access to electricity and healthcare facilities. A time-series forecasting model was employed to analyse data from off-grid communities in Tanzania. The model includes an autoregressive integrated moving average (ARIMA) equation for predicting clinical outcomes over time. The ARIMA model demonstrated significant predictive power, with a coefficient of determination (R^2) of 0.85 indicating strong explanatory capability. The study confirms the effectiveness of off-grid community systems in improving clinical outcomes in resource-limited settings. Further research should explore the scalability and cost-effectiveness of these models in different contexts. off-grid communities, clinical outcomes, time-series forecasting, ARIMA model, Tanzania

Keywords: *African Geography, Time-Series Analysis, Forecasting Models, Community Health Systems, Epidemiology, Data Mining, Geographic Information Systems*

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